Contents

Preface ..... **ix**

I. Frameworks for Professional Collaborations **1**
Which components of collaborations matter the most?

1. Improving Mathematics Achievement:
The Power of Professional Learning Communities 3
Robert Eaker
Middle Tennessee State University, Murfreesboro, Tennessee
Janel Keating
White River School District, Buckley, Washington

2. We're a Learning Community! Now What?
Alan Blankstein 19
The HOPE Foundation, Bloomington, Indiana

3. Closing the Achievement Gap:
Systemic Collaboration for Equity in Mathematics 31
George Ashline
Saint Michael's College, Colchester, Vermont
Marny Frántz
Vermont Mathematics Partnership, Westford, Vermont
Kendra Gorton
Milton Elementary School, Milton, Vermont
Sandra Hepp
Milton Elementary School, Milton, Vermont
Stephanie Ratmeyer
The Vermont Institutes/Vermont Mathematics, Montpelier, Vermont

II. Students and Student Learning **47**
How does a focus on student learning impact mathematics teaching and learning?

4. Centering the Teaching of Mathematics on Urban Youth:
Learning Together about Our Students and Their Communities 49
Laurie H. Rubel
Brooklyn College of the City University of New York, New York, New York

5. An Urban Partnership Rooted in Putting Principles of a Formative Assessment System into Practice 61

DeAnn Huinker
University of Wisconsin–Milwaukee, Milwaukee, Wisconsin
Henry Kranendonk
Milwaukee Public Schools (retired), Milwaukee, Wisconsin
Janis Freckmann
Milwaukee Public Schools (retired), Milwaukee, Wisconsin

6. Adapting Instruction for Latina/o Students: A Collaborative Experience between Teachers and Researchers..... 75

José María Menéndez
Pima Community College, Tucson, Arizona
Laura Kondek McLeman
University of Michigan–Flint, Flint, Michigan
Sandra I. Musanti
University of Texas at Brownsville, Brownsville, Texas
Barbara Trujillo
Albuquerque, New Mexico
Leslie H. Kahn
Tucson, Arizona

7. The School-Based Teacher Learners-to-Leaders Project: Learning from an Authentic Problem of Practice 87

Jon Rahn Manon
University of Delaware, Newark, Delaware
Janice McCarthy
Red Clay Consolidated School District, Wilmington, Delaware

III. Teachers and Teacher Learning 101
What practices engage teachers in ways that support their continued learning?

8. The Importance of Collaboration to New Teacher Development: Two Central Features of an Induction Fellowship..... 103

Rachael Eriksen Brown
Knowles Science Teaching Foundation, Moorestown, New Jersey
Jeanne M. Vissa
Knowles Science Teaching Foundation, Moorestown, New Jersey
Jennifer L. Mossgrove
Knowles Science Teaching Foundation, Moorestown, New Jersey

9. Building a School-University Collaboration:
A Search for Common Ground 117

Margaret S. Smith
University of Pittsburgh, Pittsburgh, Pennsylvania
Jennifer L. Cartier
University of Pittsburgh, Pittsburgh, Pennsylvania
Samuel L. Eskelson
University of Pittsburgh, Pittsburgh, Pennsylvania
Miray Tekkumru-Kisa
University of Pittsburgh, Pittsburgh, Pennsylvania

10. Working *with*, Supporting, and Empowering Mathematics
Teaching Professionals: A Model of Effective Leadership 133

Michelle Cirillo
University of Delaware, Newark, Delaware
Tammie Cass
Nodaway Valley Middle School, Fontanelle, Iowa
Darin Dowling
McCombs Middle School, Des Moines, Iowa
Jean Krusi
Ames Middle School, Ames, Iowa
Lana Lyddon Hatten
Central Academy, Des Moines, Iowa
Jeff Marks
Roosevelt High School, Des Moines, Iowa
Angie Shindelar
Des Moines Public Schools, Des Moines, Iowa

IV. Teacher Leaders and Coaches 145
How can we develop teachers into leaders within and across schools?

11. Coaching and Elementary Mathematics Specialists:
Findings from Research 147

Patricia F. Campbell
University of Maryland, College Park, Maryland

12. Using Instructional Coaching:
Customized Professional Development in an
Integrated High School Mathematics Program 161

Erin Elizabeth Krupa
Montclair State University, Montclair, New Jersey
Jere Confrey
North Carolina State University, Raleigh, North Carolina

13. The Role of Communities of Practice in Developing Teacher Leadership 175

Antonia Cameron
Metamorphosis Teacher Learning Communities, New York, New York
Frances Blanchette
Public School 24, Brooklyn, New York
Glenda Francis
The Graduate Center–CUNY, New York, New York
Christina Fuentes
Public School 24, Brooklyn, New York
Mayra Rivera-Deliz
Public School 24, Brooklyn, New York

V. Working with Multiple Partners 191
How can professionals from different settings and roles work together to benefit all?

14. Collaborative Problem Solving as a Basis for a Professional Learning Community: Four Perspectives on Collaboration in the BIFOCAL Project 193

Edward Silver
University of Michigan, Ann Arbor, Michigan
Valerie Mills
Oakland Schools, Waterford, Michigan
Dana Gosen
Oakland Schools, Waterford, Michigan
Geraldine Devine
Oakland Schools, Waterford, Michigan

15. Sustaining Effective Professional Development School Relationships 205

Jackie Menser
Randolph Middle School, Charlotte, North Carolina
Adam Harbaugh
University of North Carolina at Charlotte, Charlotte, North Carolina
Claudia Cox
Randolph Middle School, Charlotte, North Carolina
David K. Pugalee
University of North Carolina at Charlotte, Charlotte, North Carolina

16. Teachers Learning through Collaboration:
Challenges and Impacts of an Inter-institutional Project 217

Jacqueline Coomes
Eastern Washington University, Cheney, Washington
Janet Hart Frost
Washington State University Spokane, Spokane, Washington
Kristine Lindeblad
Washington State University Spokane, Spokane, Washington

17. Voices of Mathematicians and Mathematics Teacher Educators
Co-Teaching Prospective Secondary Teachers 229

Denisse R. Thompson
University of South Florida, Tampa, Florida
Catherine Beneteau
University of South Florida, Tampa, Florida
Gladis Kersaint
University of South Florida, Tampa, Florida
Sarah K. Bleiler
University of South Florida, Tampa, Florida

VI. Going to Scale 243
How can collaborations support large numbers of students, teachers, and schools?

18. Learning to Use Student Thinking:
Development and Spread of "Re-engagement"
Strategies through Lesson Study 245

Catherine Lewis
Mills College, Oakland, California
Rebecca Perry
Mills College, Oakland, California
Shelley Friedkin
Mills College, Oakland, California
Linda Fisher
Silicon Valley Mathematics Initiative, Morgan Hill, California
Jacob Disston
Willard Middle School, Berkeley, California
David Foster
Silicon Valley Mathematics Initiative, Morgan Hill, California

19. Negotiating Cultural Meanings:
A Large-Scale Collaboration among Mathematicians, Mathematics Teacher Educators, and Teachers.....259

Gladis Kersaint
University of South Florida, Tampa, Florida
Sandra Berger
University of South Florida, Tampa, Florida

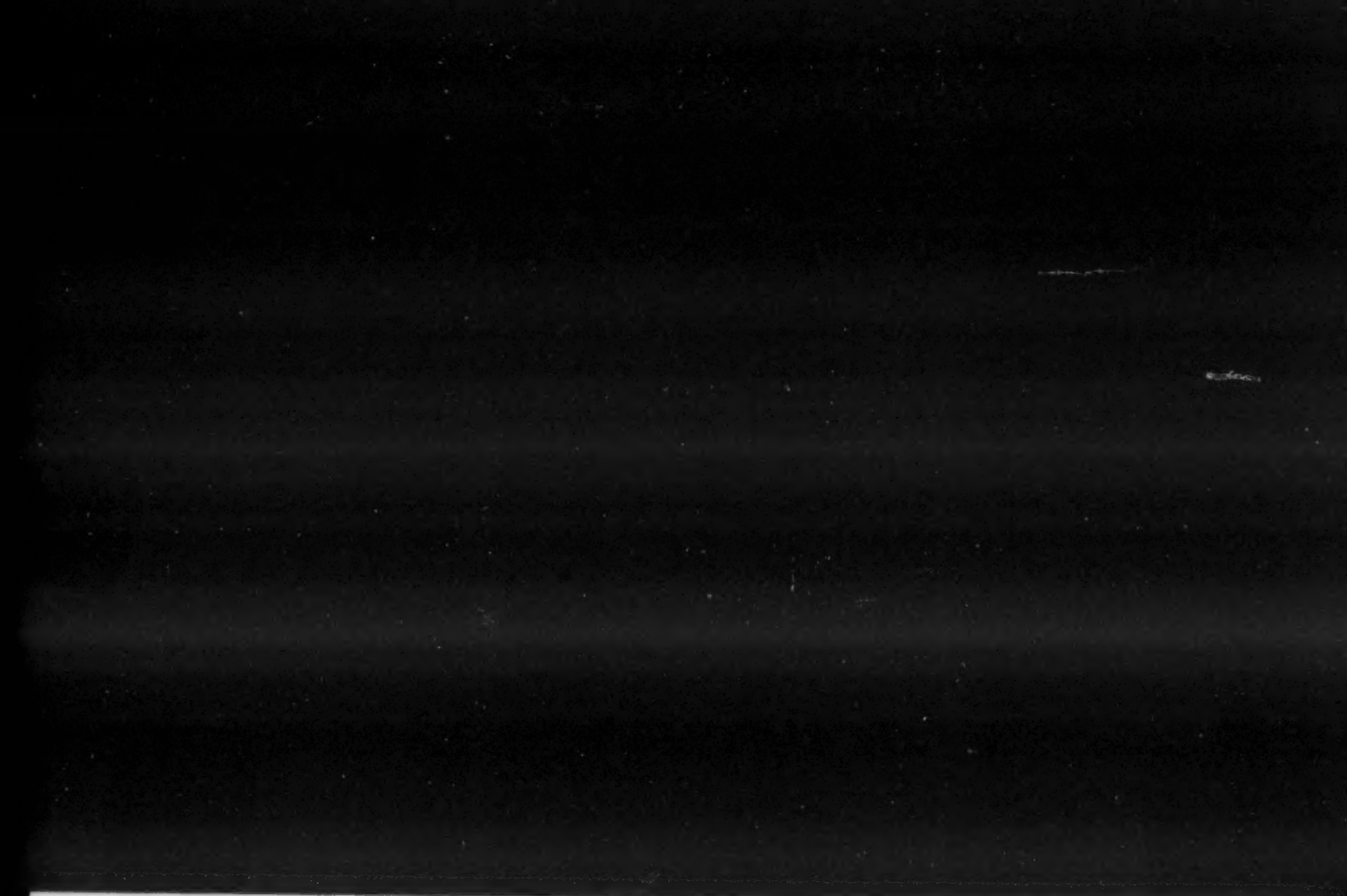
20. Powerful Pedagogical Practices Program: Creating a Catalyst for Moving to a Problem-Based Curriculum.....271

Jamila Q. Riser
Delaware Mathematics Coalition, Dover, Delaware

VII. Sustaining Professional Collaborations 283
What must be in place to sustain the energy and gains within a professional collaboration?

21. Establishing and Maintaining Collaboration:
Factors Related to the Sustainability of Lesson Study.....285

Randall Groth
Salisbury University, Salisbury, Maryland

22. Building and Sustaining Professional Collaborations:
Using Japanese Lesson Study to Improve the Teaching and Learning of Mathematics.....297

Joan Moss
Ontario Institute for Studies in Education/University of Toronto, Toronto, Ontario
Richard Messina
Institute of Child Study Laboratory School, Toronto, Ontario
Elizabeth Morley
Institute of Child Study Laboratory School, Toronto, Ontario
Diane Tepylo
Ontario Institute for Studies in Education/University of Toronto, Toronto, Ontario